

**Abstract**

A multistage evaporation system is proposed in which the first evaporator (1) is heated via a jet wet washer (33) with superheated, air-containing waste steam, for example of a drier. The product vapor of the first evaporator stage (1) is fed via a mechanical compressor (67) to a second evaporator stage (3) for heating. The compressor (67) ensures firstly a lowering of the dew point in the evaporator space of the first evaporator stage (1) and secondly a temperature increase of the product vapor fed to the second evaporator stage (3) for heating.

(Fig. 1)